Ontario

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Standards Development Branch
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Memorandum:

To: Users of the *Guideline for Use at Contaminated Sites in Ontario - 1996*

From: Standards Development Branch

Date: December 3, 1996

Subject: ERRATUM : SOIL and GROUNDWATER CRITERIA CHANGES

Appendix 2 of *Guideline for Use at Contaminated Sites in Ontario*

This notice is being issued to revise certain soil and groundwater criteria that are found in Tables A-D (Appendix 2) of the *Guideline for Use at Contaminated Sites in Ontario - 1996*, and to inform users of the guideline of changes that have been made to two of the support documents.

Changes to the Main Guideline Document

In the first case, a mathematical error has been detected in one of the vapour transport models that was used to modify the soil criteria for medium/fine textured soil conditions (shown in round brackets in the criteria Tables A and B). The following four tables show revisions that need to be made to medium/fine textured soil remediation criteria for a number of volatile organic chemicals. In Tables A and B, the actual numbers in round brackets change, while in Tables C and D, double asterisks are now required for some criteria, as the unchanged Table C and D criteria values are now numerically equal to the corresponding medium/fine textured soil criteria values in Tables A and B, respectively. These changes have also resulted in the addition of a medium/fine textured soil criterion (in round brackets) for petroleum hydrocarbons (gas/diesel) in the industrial/commercial land use category of Table B.

In the second case, a unit transcription error from one of the toxicity studies that was utilized has been detected which affects all soil and groundwater remediation criteria for pyrene (Tables A-D).

In the third case, a few soil criteria values in Tables C and D have been identified that should have been marked with one asterisk, as the levels in Table C and D are numerically equal to the corresponding values in Tables A and B. There is no change in the numerical value for these parameters. Also, for clarification the caveat at the top of Tables A and B should be revised to read as follows: *'Soil Criteria for Inorganics in this Table apply only where Surface Soil pH is 5.0 to 9.0 and for Full Depth Use, the Subsurface Soil pH is 5.0 to 11.0'.*

As indicated, the above changes are to be made to Tables A-D in Appendix 2 of the main guideline document.

For those who do not currently have a copy of the document, all new requests after this date will contain the revised information.

Changes to Two of the Support Documents

Because the changes will necessitate a more complex modification of the supporting document, *Rationale for the Development and Application of Generic Soil, Groundwater and Sediment Criteria for Use at Contaminated Sites in Ontario - 1996*, and its appendices, a separate Erratum has been prepared for that document.

In addition, a few minor wording changes and some additional guidance have been made to the document titled: "*Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario - 1996* ". Again, a separate Erratum has been prepared for that document.

The electronic versions of both of these support documents also have been revised and will be available via the same arrangements as before.

For additional information on any of these changes, please contact:

A. L. Kuja (905) 456-2504
M. Marsh (905) 456-2504
R. G. Pearson (416) 323-5102.

Copies of all three Errata can be obtained by written request to the above address, from the MOEE web site or via Fax request to: (905) 456-1003 or (416) 323-5166.

We regret any inconvenience these changes may have caused.

TABLE A: Revised Surface Soil and Groundwater Remediation Criteria for Three Land Uses (Agricultural, Residential/Parkland and Industrial/Commercial) in a Potable Groundwater Situation.

Soil Criteria for Inorganics in this Table apply only where Surface Soil pH is 5.0 to 9.0 and for Full Depth Use, the Subsurface Soil pH is 5.0 to 11.0				
TABLE A:	Revised Soil Remediation Criteria (ug/g)			Potable Groundwater Criteria (ug/L)
Chemical Compound	Agricultural Land Use	Residential/ Parkland Land Use	Industrial/ Commercial Land Use	All Land Use Categories
BROMOMETHANE	(0.38)	(0.38)	(0.38)	
CARBON TETRACHLORIDE	(0.64)	(0.64)	(0.64)	
DICHLOROETHANE, 1,2-	(0.05)	(0.05)	(0.05)	
DICHLOROETHYLENE, 1,1-	(0.015)	(0.015)	(0.015)	
DICHLOROPROPANE, 1,2-	(0.12)	(0.12)	(0.12)	
DICHLOROPROPENE, 1,3-	(0.04)	(0.04)	(0.04)	
ETHYLENE DIBROMIDE	(0.01)	(0.01)	(0.012)	
HEPTACHLOR	(0.12)	(0.12)	(0.15)	
HEXACHLORODBUTADIENE	(2.2)	(2.2)	(2.2)	
HEXACHLOROETHANE	(6.3)	(6.3)	(8.5)	
PYRENE	250	250	250	40
TETRACHLOROETHANE, 1,1,1,2-	(0.12)	(0.12)	(0.12)	
TRICHLOROETHYLENE	(3.9)	(3.9)	(3.9)	
VINYL CHLORIDE	(0.0075)	(0.0075)	(0.0075)	

( ) Criterion value in brackets applies to medium/fine textured soils only.

TABLE B: Revised Surface Soil and Groundwater Remediation Criteria for Two Land Uses (Residential/Parkland and Industrial/Commercial) in a Non-Potable Groundwater Situation.

Soil Criteria for Inorganics in this Table apply only where Surface Soil pH is 5.0 to 9.0 and for Full Depth Use, the Subsurface Soil pH is 5.0 to 11.0			
TABLE B:	Revised Soil Remediation Criteria (ug/g)		Revised Non-Potable Groundwater Criteria (ug/L)
Chemical Compound	Residential/ Parkland Land Use	Industrial/ Commercial Land Use	Both Land Use Categories
BENZENE	(25)	(25)	
BIS(2-CHLOROISOPROPYL)ETHER	(1.9)	(2.6)	
BROMOFORM	(14)	(14)	
BROMOMETHANE	(0.38)	(0.38)	
CARBON TETRACHLORIDE	(0.64)	(0.64)	
CHLOROBENZENE	(30)	(30)	
CHLOROFORM	(4.9)	(4.9)	
DICHLOROETHANE, 1,1-	(100)	(140)	
DICHLOROETHANE, 1,2-	(0.14)	(0.14)	
DICHLOROETHYLENE, 1,1-	(0.015)	(0.015)	
DICHLOROPROPANE, 1,2-	(0.12)	(0.12)	
DICHLOROPROPENE, 1,3-	(0.041)	(0.041)	
ETHYLBENZENE	(500)	(1000)	
ETHYLENE DIBROMIDE	(0.01)	(0.02)	
HEPTACHLOR	(0.12)	(0.15)	
HEXACHLOROBUTADIENE	(2.4)	(2.4)	
HEXACHLOROETHANE	(6.3)	(13)	
METHYL ISOBUTYL KETONE	(69)	(69)	
METHYL TERT BUTYL ETHER		(410)	
METHYLNAPHTHALENE, 2-(*1-)	(1000)	(1600)	
PETROLEUM HYDROCARBONS (gas/diesel)		(2000)	
PYRENE	250	250	40
STYRENE	(7.7)	(7.7)	
TETRACHLOROETHANE, 1,1,1,2-	(0.12)	(0.12)	
TETRACHLOROETHANE, 1,1,2,2-	(0.23)	(0.23)	
TOLUENE	(150)	(150)	
TRICHLOROETHYLENE	(3.9)*	(3.9)*	
VINYL CHLORIDE	(0.0075)	(0.0075)	
XYLENES	(210)	(210)	

( ) Criterion value in brackets applies to medium/fine textured soils only.

* Soil criterion adopted from Table A (potable groundwater situation) to account for degradation to vinyl chloride.

TABLE C: **Revised Sub-Surface Soil Remediation Criteria for Two Land Uses (Residential/Parkland and Industrial/Commercial) in a Potable Groundwater Situation.**

SOIL CRITERIA FOR INORGANICS IN THIS TABLE APPLY ONLY WHERE SOIL pH IS 5.0 TO 11.0		
TABLE C:	Revised Soil Remediation Criteria (ug/g)	
Chemical Compound	Residential/ Parkland Land Use	Industrial/ Commercial Land Use
CHRYSENE		Criterion requires one asterisk after value
DICHLOROETHANE, 1,2-	Criterion requires two asterisks after value	Criterion requires two asterisks after value
DICHLOROETHYLENE, CIS-1,2-	Criterion requires one asterisk after value	Criterion requires one asterisk after value
DICHLOROETHYLENE, TRANS-1,2-	Criterion requires one asterisk after value	Criterion requires one asterisk after value
DICHLOROPROPENE, 1,3-	Criterion requires two asterisks after value	Criterion requires two asterisks after value
ETHYLENE DIBROMIDE		Criterion requires two asterisks after value
HEPTACHLOR		Criterion requires two asterisks after value
HEXACHLOROBUTADIENE	Criterion requires two asterisks after value	Criterion requires two asterisks after value
HEXACHLOROETHANE		Criterion requires two asterisks after value
PYRENE	250*	250*
TETRACHLOROETHYLENE	Criterion requires one asterisk after value	Criterion requires one asterisk after value
TRICHLOROETHANE, 1,1,1-	Criterion requires two asterisks after value	Criterion requires two asterisks after value
TRICHLOROETHYLENE	Criterion requires two asterisks after value	Criterion requires two asterisks after value

* Criterion value is the same as the corresponding criterion in Table A.

TABLE D: **Revised Sub-Surface Soil Remediation Criteria for Two Land Uses (Residential/Parkland and Industrial/Commercial) in a Non-Potable Groundwater Situation.**

SOIL CRITERIA FOR INORGANICS IN THIS TABLE APPLY ONLY WHERE SOIL pH IS 5.0 TO 11.0		
TABLE D:	Revised Soil Remediation Criteria (ug/g)	
Chemical Compound	Residential/ Parkland Land Use	Industrial/ Commercial Land Use
DICHLOROETHYLENE, CIS-1,2-	Criterion requires one asterisk after value	Criterion requires one asterisk after value
DICHLOROETHYLENE, TRANS-1,2-	Criterion requires one asterisk after value	Criterion requires one asterisk after value
HEPTACHLOR		Criterion requires two asterisks after value
METHYL ISOBUTYL KETONE	Criterion requires two asterisks after value	Criterion requires two asterisks after value
METHYL TERT BUTYL ETHER		Criterion requires two asterisks after value
METHALNAPHTHALENE 2-(*I-)		Criterion requires two asterisks after value
PYRENE	250*	250*
TETRACHLOROETHYLENE	Criterion requires one asterisk after value	Criterion requires one asterisk after value
TRICHLOROETHANE, 1,1,1-	Criterion requires two asterisks after value	Criterion requires two asterisks after value
TRICHLOROETHYLENE	Criterion requires two asterisks after value	Criterion requires two asterisks after value

* Criterion value is the same as the corresponding criterion in Table B.